

Amendment

Response to Final Office Action dated July 20, 2009

**REMARKS**

These remarks are in response to the Final Office Action dated July 20, 2009. This response is timely filed.

At the time of the Office Action, claims 1-12 were pending. In the Office Action, claims 1-12 were rejected under 35 U.S.C. §103(a). The rejections are discussed in more detail below.

**I. Rejections of the claims based on cited art**

Claims 1-3, 5-8 and 10-12 was rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,390,780 to Batchelder et al. (hereafter "*Batchelder*") in view of U.S. Patent No. 5,434,491 to Marioni ("*Marioni*") in view of U.S. Patent No. 6,710,562 to Kalb et al. ("*Kalb*"). Claim 4 was rejected under 35 U.S.C. §103(a) as being unpatentable over *Batchelder* in view of *Marioni* in view of *Kalb*, and further in view of U.S. Patent No. 6,452,202 to Eom. Claim 9 was rejected under 35 U.S.C. §103(a) as being unpatentable over *Batchelder* in view of *Marioni* in view of *Kalb*, and further in view of U.S. Patent Publication No. 2003/0076068 to Pollack. Applicant respectfully traverses these rejections. Claim 1 is patentable over the prior art.

None of the cited documents describes a device in which the pump turn-on and off is regulated according to a measured difference between a critical load angle, computed in a working condition of the pump in which the signal emitted by the float level sensor corresponds to a high level condition, and a current load angle.

Applicant previously noted that *Batchelder* and *Marioni* would not be combined to arrive at the present claims, and maintains that position. Applicant further notes that *Kalb* cannot be used to provide a teaching that a comparison of two load angle values are compared to control the motor.

*Kalb* describes a control method for an electric window winder. As thoroughly detailed in columns 3-4, lines 49-19, the load angle of the actuator is measured and compared to a threshold value. If the deviation is small enough, the current supply is readjusted in order to restore the load angle to a prevailing value  $\delta_n$ . Otherwise, no control action is taken until the rotor synchronism is lost. Hence, the control method only compares the current load angle of the motor with a threshold value which is predefined or computed by means of a preset formula, and which is not acquired during a specific (high level) condition of the system, said condition being signaled by an appropriate sensor (the float level sensor). Applicant notes that the magnetoresistive sensor, cited in the Office

Action, is needed to compute the value of the load angle, and is not meant to read a given particular "working condition" of the pump.

The system of claim 1 may be regarded as "self learning", because it is able to acquire by itself a control threshold value depending from its working environment. In contrast, the system taught by *Kalb* employs a standard control method monitoring the increment of a single control value (the load angle).

Comparing two subsequent values of a synchronous motor load angle is admittedly a known control method for a synchronous motor, while using an external sensor to read a specific working condition, recording a load angle value related to the condition; and comparing the actual load angle value to the stored one should be regarded as a patentable way of controlling the motor.

For the foregoing reasons, claims 1 is patentable over the cited prior art. Dependent claims 2-12 are also believed to be allowable because of their dependence upon an allowable base claim, and because of the further features recited

## II. Conclusion

Applicant has made every effort to present claims which distinguish over the prior art, and it is thus believed that all claims are in condition for allowance. Nevertheless, Applicant invites the Examiner to call the undersigned if it is believed that a telephonic interview would expedite the prosecution of the application to an allowance. In view of the foregoing remarks, Applicant respectfully requests reconsideration and prompt allowance of the pending claims.

Respectfully submitted,

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